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(54) **SMART CHARGING SYSTEMS FOR
PORTABLE ELECTRONIC DEVICES**

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(71) Applicant: **Apple Inc.**, Cupertino, CA (US)

(72) Inventors: **Paul X. Wang**, Cupertino, CA (US);
Zheng Gao, Sunnyvale, CA (US)

(57)

ABSTRACT

Embodiments describe a charging component for an electronic device that includes an interface surface comprising a portion of an external surface of a housing of the electronic device; a plurality of contacts positioned at the interface surface and exposed for making contact with contacts of a connector; one or more sensors for detecting a separation event; an inductor coil positioned proximate to the interface surface, wherein a central axis of the inductor coil is perpendicular to at least a portion of the interface surface; and a processor coupled to the inductor coil and the one or more sensors, wherein the processor is configured to change an operation of the inductor coil based at least in part on a measurement from the one or more sensors

(73) Assignee: **Apple Inc.**, Cupertino, CA (US)

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